95/00762 Heating and cooling potential of an undergound air-pipe system
Sawhney, R. I. and Mahajan, U. *Int. J. Energy Research,* Jul. 1994, 18, (5), 509-524.
The annual heating and cooling potential of an underground air-pipe system has been evaluated in terms of dimensionless parameters of the system. The effect of diurnal and annual variations of environmental parameters (solar radiation, ambient temperature and relative humidity) has been considered. The results are obtained for hot-dry, cold-dry and composite climatic conditions typified by the Jodhpur, Leh and Delhi climates respectively. The effect of suitable earth surface treatments on the thermal performances of the air-pipe system has also been analysed.

95/00763 Heating controls for elderly people: A report on an exploratory research project
Salvage, A. V. *Age Concern, London, 1994, 59 pp.*
The report is an exploratory research project into the needs of elderly people in relation to the control of electrical equipment in the home, with emphasis on space heating control.

95/00764 HVAC design for jails
Gill, K. E. *Heat. Pip. Air Condit.,* Jul. 1994, 66, (7), 50-59.
An overview of the mechanical, life safety and indoor air quality issues in current gaol heating, ventilation and air conditioning in the USA.

95/00765 HVAC technology and trade in Russia and other East European countries
Tabunschikov, Y. A. *Proc. Int. Cold Climate HVAC '94 Conf., Mar. 1994, 139-145.*
Discusses the development of HVAC systems in Russian and other East European countries.

95/00766 Indoor climate in the new ISS head office at Holte
Pedersen, C. K. *TFVVS,* Aug. 1994, 30, (19), 90-93. (In Danish)
Describes the new 5,500m^2 ISS head office, which has created a pleasant working environment for the building users. Describes the conditions governing the indoor climate parameters.

95/00767 Influence of transmission models for special glazing on the predicted performance of commercial buildings
Pfrommer, P. *et al., Energy & Buildings,* 1994, 21, (2), 101-110.
A new improved model has been developed to calculate the radiation transmittance, absorptance and reflectance values for glazing with optical thin films and/or tinted glass layers. The model is based on the optical behaviour of radiation in thin films and substrates. Simulation studies examined the thermal consequences of using glazing properties calculated using the improved method rather than properties calculated by applying the conventional Fresnel-based claculations for clear glass to special glazing.

95/00768 Information sources for building service professionals
Loyd, S. R. *BSRIA, Old Bracknell Lane West, Bracknell, Berkshire RG12 7AH, UK, £30,00, 1994, 44 pp.*
The book has been written for building services professionals who need to identify quickly and accurately sources which can help them in their work. Includes a directory which contains a complete list of organisations in the UK building services industry.

95/00769 Manual for ventilation assessment in mechanically ventilated commercial buildings
Persily, A. *USA National Institute of Standards & Technology, Building & Fire Research Lab., NISTIR 5329, 1994, 123 pp.*

95/00770 On the variability of cooling degree-days in an urban environment: Application to Athens, Greece
Tselepidaki, I. *et al., Energy & Buildings,* 1994, 21, (2), 93-99.
Knowledge of cooling degree-days is necessary in order to estimate the cooling requirements of buildings in a place, which characterize the overall temperature conditions during the summer period. Exact calculation of the cooling degree-days requires a long time series of hourly temperature data from representative meteorological stations. In order to study the variability of the ambient temperature distribution in an urban environment, and the representativeness of a given station, cooling degree-days for three different meteorological stations located in the major Athens area have been calculated. An important spatial and temporal variability has been found. Problems related to the increase of the ambient temperature during the last 30 years are also studied. Finally, the accuracy of simplified methods to calculate the cooling degree-hours in a place is examined.

95/00771 Operating an ice rink year-round by using a desiccant dehumidifier to remove humidity
Bradley, T. J. *et al., ASHRAE Trans. No.3747,* 1994, 100, (1), 116-121.

95/00772 Passive stack ventilation systems – design and installation
Stephen, R. K. *et al., BRE Information Paper 13/94, Building Research Establishment, 1994, 6 pp.*
Reports that passive stack ventilation is a means of removing unwanted moisture from dwellings, and that proper design and installation is vital to their performance. Provides a paper with detailed guidance on the subject, which is in support of the 1995 edition of the Approved Document to Part F of the Building Regulations.

95/00773 Possibilities and limitations of cooling load calculations
Hain, K. *et al., Clima Comm. Int.,* Jul. 1994, 28, (8), 26-27. (In German)

95/00774 A procedure for optimising coils in a run-around heat exchanger system
Bennett, I. J. *et al., ASHRAE Trans., No. 3780,* 1994, 442-451.
The paper reports that to-date, the overall effectiveness of run-around heat exchangers has been limited to about 50%, making them uneconomical in many HVAC applications. Points out that system performance improvements have been difficult due to the complexity and number of physical variables and economic considerations involved.

95/00775 Radiant heating in sports halls
Blokpoel, L. *Gas (Netherlands),* Oct. 1994, 114, (10), 529-530. (In Flemish)
Radiant heating is an attractive option in the operation of sports halls. For best benefit of its advantages some measures need to be taken. A control system should ensure, for instance, that the heat is transported to the right place, say where the audience are sitting. Less heat is generally needed in the sporting zone, since active sporters generate sufficient heat. The right kind of control system will also ensure that actual energy savings are achieved.

95/00776 Shadow prices for heat generation in time-dependent and dynamic energy systems
Andersson, M. *Energy,* Dec. 1994, 19, (12), 1205-1211.
Shadow prices for heat generation are used to study the impact of changes in heat demand on the total system cost of an existing district-heating system in Sweden. The energy system may be considered to be both dynamic, because there is energy storage, and time-dependent since the electricity tariff is time-differentiated and the heat demand varies over the year and day. The energy system has been analysed with and without energy storage. The analysis shows that despite a reduction in system cost, the use of energy storage can result in higher shadow prices for heat generation in some time periods.

95/00777 Stack effect ventilation of an infant's school
Palmer, J. *et al., 14th AIVC Conf. Energy Impact of Ventilation & Air Infiltration, Copenhagen, Denmark, Sep. 1993, 157-166.*
The paper discusses the results of monitoring the ventilaton at Netley Infants' School in Hampshire. The school was designed so that solar heating in the summer of a south-facing conservatory would enhance the stack effect and induce ventilation in the adjacent classrooms.

95/00778 State of the art sports facility's HVAC
Horton, M. K. *Heat. Pip. Air Condit.,* Aug. 1994, 66, (8), 34-41.
Describes Cleveland's (Ohio, USA) multimillion dollar Gateway sports and entertainment complex. Gives details of the HVAC distribution systems, controls, plumbing and fire protection.

95/00779 A Stirling effort
Winstanley, R. *Bldg. Serv. CIBSE J.,* Aug. 1994, 16, (8), 43-44.
Describes how EA Technology's Stirling engine could make combined heat and power technically and economically viable for domestic and small commercial users.

95/00780 Symbolic modeling in building energy simulation
Nataf, J. M. and Winkelmann, F. *Energy & Buildings,* 1994, 21, (2), 147-153.
The authors show how symbolic modelling is used in the Simulation Problem Analysis and Research Kernal (SPARK) for solving complex problems in building energy simulation. After brief overview of SPARK, the authors describe its symbolic interface, which reads equations that are entered in symbolic form and automatically generates a program that solves the equations. The application of this method to solving the partial differential equations for two-dimensional heat flow is illustrated.

95/00781 Taking personal charge of district heating
Energy in Buildings & Industry, Sep. 1994, 13, (8), p. 38.
Flat-rate charging systems have long been a major obstacle to district heating. However, the introduction of individual electronic heat meters are assisting residents obtain an accurate bill for precisely the amount of heat they use.